FAA Approves IATA's Operational Safety Audit (IOSA) Program: A Historical Review and Future Implications for the Airline Industry

Lindsey Sabec*

I. Introduction

With the globalization of the airline industry, everyday thousands of Americans board planes as ticketed passengers for a U.S. airline when the actual travel for all or a portion of the trip may be with a foreign carrier's aircraft and crew. Following September 11, 2001, the Federal Aviation Administration ("FAA") undertook to implement stringent new safety and security measures to protect the airline industry and their passengers. Accordingly, the burgeoning practice of sharing flights, known as "code-sharing," took center stage. On July 2, 2004, the FAA announced U.S. airlines may use the universal safety audit program developed by the International Air Transport Association ("IATA") when auditing current and prospective foreign code-share partners. The IATA

^{*} JD Candidate 2006, Sturm College of Law, Denver, Colorado.

^{1.} Don Phillips, U.S. Airlines' 'Handoffs' Raise Safety Concerns: Foreign Partners Come Under Scrutiny, Wash. Post, Mar. 7, 1999, at A01, available at http://www.iasa.com.au/folders/Saf-ety_Issues/others/code.html; see also Office of the Secretary & Federal Aviation Administration, Executive Summary: Aviation Safety Under International Agreements, Report No. AV-1999-138 (Sept. 30, 1999) [hereinafter executive summary], available at http://www.oig.dot.gov/show txt.php?id=29.

^{2.} FEDERAL AVIATION ADMINISTRATION, FISCAL YEAR 2001 FINANCIAL STATEMENTS, at 8 [hereinafter FAA FINANCIAL STATEMENTS], available at http://www.faa.gov/aba/html_fm/finst.html.

^{3.} Phillips, supra note 1, at A01.

^{4.} Press Release, Department of Transportation, FAA Approves of IATA Safety Audit

Operational Safety Audit ("IOSA") program is the only globally accepted airline audit process providing internationally recognized audit standards.⁵

For years, the Department of Transportation ("DOT"), through the FAA and the Office of the Secretary of Transportation ("OST"), has required U.S. airlines to audit current and prospective foreign code-share partners themselves.⁶ However, committed to strengthening the air safety standards of U.S. airlines, the FAA's recognition of the IOSA program no longer requires U.S. airlines to perform audits on code-share partners themselves,⁷ nor do U.S. airlines have to obtain separate audits of foreign code-share partners who have been audited by the IOSA program.⁸ Now, the FAA will accept audits performed by IOSA-accredited organizations as another method for U.S. airlines to fulfill their responsibility of ensuring their code-share partners satisfy international safety standards.⁹

Although the FAA will still recognize audits performed by non-IOSA accredited organizations as long as they satisfy FAA standards, ¹⁰ the FAA's approval of the IOSA program provides several new benefits to the airline industry, as well as passengers worldwide. In addition to providing uniform international audit standards to ensure airline safety compliance throughout the world, ¹¹ the IOSA program reinforces the FAA's commitment to ensuring "a safe, secure, and efficient global aerospace system that contributes to national security and the promotion of U.S. aerospace safety." Additionally, U.S. airlines will benefit by decreasing costs, saving time, and reducing the manpower necessary to perform multiple audits on every prospective foreign code-share partner as previously mandated. IATA, as an independent international body with more than 270 member airlines, international credibility, and access to worldwide resources, is well positioned to exert globally recognized audit

Process (July 2, 2004) [hereinafter Dep't of Transp. Press Release], at http://www.dot.gov/affairs/dot9604.htm (last visited Mar. 20, 2005).

^{5.} SH&E Named Audit Organization for IATA Operational Safety Audit 'IOSA' Program, N.Y. Bus. Wire, May 17, 2004, at http://www.findarticles.com/p/articles/mi_m0EIN/is_2004_May_17/a-i_n6030277.

^{6.} Dep't of Transp. Press Release, supra note 4, at 1.

^{7.} Press Release, Federal Aviation Administration, FAA Recognizes International Safety Audit Program (July 2, 2004) [hereinafter FAA Press Release], at http://www.faa.gov/apa/pr/pr.cfm?id=1867.

^{8.} Dep't of Transp. Press Release, supra note 4, at 1.

^{9.} FAA Press Release, supra note 7, at 1.

^{10.} Id.

^{11.} *Id*.

^{12.} FAA FINANCIAL STATEMENTS, supra note 2, at 8.

^{13.} Executive Summary, supra note 1, at 12-13; see also FAA Press Release, supra note 7, at 1.

standards.¹⁴ Through the IOSA program "the [airline] industry will be in a position to achieve the benefits of cost-efficiency through a significant reduction in audit redundancy."¹⁵

Accordingly, the FAA's approval of the IOSA program is one of the most important steps toward strengthening the air safety standards of a U.S. air carrier's foreign code-share partners. As Marion Blakey, FAA Administrator, stated, "[t]he United States and its aviation partners around the world share a commitment to improving global aviation safety. This new audit accreditation programme is an important step toward achieving a single international set of audit standards that will make flying safer."

This article examines the history surrounding the need for individual airline safety audits, the FAA code-share safety guidelines, the need for standardized audits, the infrastructure and procedure of the IOSA program, and future implications of the airline industry.

II. THE AIRLINE SAFETY AUDIT PROBLEM: PRE-IOSA

A. THE RISE OF CODE-SHARE AGREEMENTS AND PRE-EXISTING SAFETY STANDARDS

In 1999, the U.S. airlines market contained 149 large U.S. airlines providing scheduled domestic service. 18 However, international markets were still virtually untapped, accounting for 21% of the total passenger revenues for the major U.S. airlines. 19 However, with the globalization of the airline industry, the emergence of code-share agreements is inevitable to the viability of the airline industry. 20 Accordingly, the practice of code sharing has become necessary for international travel in order to create

^{14.} IATA Plans Ambitious Timetable for Global Audit System, WORLD AIRLINE NEWS, June 8, 2001, at http://www.findarticles.com/p/articles/mi_m0ZCK/is_23_11/ai_75434282 (last visited Apr. 4, 2005).

^{15.} International Aviation Transportation Association, Business Solutions: IATA Operational Safety Audit (IOSA) [hereinafter Business Solutions: IOSA], at http://www.ia-ta.org/ps/services/iosa1.htm (last visited Mar. 20, 2005).

^{16.} FAA Approves IATA's Airline Safety Audit Programme, EUROPEAN TRANSPORT FORUM, July 7, 2004 [hereinafter ETF], at http://www.transport-forum.com/content/article/detail/7520.

^{17.} Press Release, International Air Transport Association, FAA Approves IATA's Airline Safety Audit Programme (July 5, 2004) [hereinafter IATA Press Release], at http://www.iata.org/pressroom/pr/2004-07-05-02; see also FAA Press Release, supra note 7, at 1.

^{18.} EXECUTIVE SUMMARY, supra note 1, para. I, at 1.

^{19.} Id

^{20.} GOVERNMENT AFFAIRS, EXTERNAL RELATIONS DIVISION, INTERNATIONAL AIR TRANSPORTATION ASSOCIATION, COMMENTS ON THE EUROPEAN COMMISSION CONSULTATION PAPER: AIR PASSENGER RIGHTS IN THE EUROPEAN UNION 20 (Mar. 2000) [hereinafter Air Passenger Rights].

seamless travel for passengers around the world.21

Code sharing is a market alliance in which one airline issues tickets in its own name for travel to a particular city, but another airline and crew provide some or all of the transportation.²² Accordingly, under a code-share alliance an airline buys a block of tickets from another airline²³ and places its designator code on the flight operated by the other airline.²⁴ Therefore, when the airline issues a ticket using a code-share partner, the passenger's ticket reads as if the passenger was flying on the U.S. airline for the whole trip even though the passenger transfers to a plane flown by another airline.²⁵ For example, a person flying from Denver to Frankfurt may read their ticket that says they will depart on United flight 264 to Philadelphia and transfer in Philadelphia to United flight 9199, which will take them to Frankfurt. However, the United flight 9199 is really Lufthansa flight 418 operated by Lufthansa airlines and crew.²⁶

Code-share agreements offer substantial benefits to airlines. Not only does code-sharing provide passengers with seamless travel service throughout the world, it is also profitable for the airlines.²⁷ "In addition to enhancing international trade and commerce, air carriers may receive substantial profits from code share agreements and market the agreements as a 'seamless,' efficient way for passengers to engage in international travel in an increasingly global air service environment."²⁸

Between 1994 and 1999, code-share agreements nearly tripled.²⁹ "One and a half billion passengers have been carried by the world's airlines up to 1999 and this is expected to double in the first decade of this century."³⁰ However, as of 1999, U.S. airlines were primarily collaborating with airlines in Western Europe and other countries with well-established safety records similar to those of the United States.³¹ With the

^{21.} See Phillips, supra note 1, at A01.

^{22.} Press Release, Department of Transportation, DOT Issues Guidelines for Code-Share Safety Audits (Feb. 29, 2000) [hereinafter Guidelines Press Release], at http://www.dot.gov/affairs/2000/dot4200.htm.

^{23.} Phillips, supra note 1, at A01.

^{24.} Guidelines Press Release, supra note 22.

^{25.} See Phillips, supra note 1, at A01.

^{26.} Id.

^{27.} Executive Summary, supra note 1, at i.

^{28.} Id.

^{29.} Id. at iii; see also Press Release, House of Representatives Transportation and Infrastructure Committee, Oberstar Commends DOT on Code-Sharing Safety Guidelines But Plan Lacks Mandatory Requirements in Oberstar Bill (Feb. 29, 2000) (stating the number of international code-share agreements has more than doubled in the last five years).

^{30.} Commission of the European Communities, Communication from the Commission: A European Community Contribution to World Aviation Safety Improvement, Doc. No. COM (2001) 390 final, para. 2.1.1, at 2 [hereinafter European Community Contribution].

^{31.} Executive Summary, supra note 1, at iii.

growth of international travel, U.S. airlines are now partnering with airlines from other, less-established, regions of the world where aviation safety accident records are not as strong as those of the United States.³² Accordingly, "[t]his variability in safety [accident] records shows that economics and seamless travel ought not to be the sole consideration in approving and overseeing code share agreements."³³ Accident reports are good indicators of safety problems but alone do not necessarily mean an aircraft is unsafe.³⁴

As of 1999, data from an Executive Summary audit, assessing the safety of international aviation code-share agreements, indicated airlines from less-established regions had significantly more accidents resulting in fatalities.³⁵ In the 1944 Chicago Convention, consisting of fifty-two states, aviation safety was allocated to individual countries.³⁶ However, the Executive Summary audit indicated the DOT's code-share approval process did not adequately address safety implications. In the United States, safety was not treated as a major factor in the code-share approval process.³⁷ Instead, in determining whether to approve a foreign code-share agreement, the DOT assessed whether such an agreement would be in the public interest by considering: reciprocal agreements, impact on competition, the financial strength of the foreign carrier, and finally safety.³⁸

Additionally, as of September 1999, "the FAA had not taken an active role in the approval or oversight of international code share agreements." Although the principal measure of safety of foreign code-share partners was through the FAA's International Aviation Safety Assessment ("IASA") Program developed in 1992, the FAA evaluated the safety oversight system of each country, not the safety of its individual airlines. The Programme assesse[d] whether a foreign civil aviation authority ("CAA") [in each country] complie[d] with the minimum international standards for aviation safety oversight established by the International Civil Aviation Organisation (ICAO)."

ICAO, a specialized United Nations agency, was created at the 1944

^{32.} Id.

^{33.} Id. at v.

^{34.} Executive Summary, supra note 1, at vi.

^{35.} See id. at v.

^{36.} See Convention on International Civil Aviation, Chicago Dec. 7, 1944, at preamble, ICAO Doc. 7300/6 (8th ed. 2000), 61 Stat. 1180, T.I.A.S. No. 1591 [hereinafter ICAO Preamble], available at http://www.yale.edu/lawweb/ava-lon/decade/decad048.htm; see also European Community Contribution, supra note 30, para. 2.2.4, at 3.

^{37.} EXECUTIVE SUMMARY, supra note 1, at vi.

^{38.} Id. at ii.

^{39.} Id. at iii.

^{40.} European Community Contribution, supra note 30, annex 2, at 14.

^{41. .}Id.

^{42.} Id.

Chicago Convention for the purpose of regulating and promoting international civil aviation, specifically establishing standards for security and safety issues.⁴³ The 1944 Chicago Convention charged the ICAO with the authority to act as an arbiter between code-share partners, investigate any situation that presents obstacles to the development of international air navigation, and take all steps necessary to maintain safety and regularity of international air industry.⁴⁴ Furthermore, the 1944 Chicago Convention established ICAO Standards and Recommended Practices ("SARPs") designed to ensure a "minimum international standards for [civil] aviation safety."⁴⁵

Accordingly, the FAA evaluated the safety of each country using three categories: Category 1, Category 2, or Category 3. A Category 1 rating meant the foreign carrier's safety oversight met or exceeded the minimum ICAO international standards for safety.⁴⁶ A foreign codeshare agreement was only approved if the foreign air carrier:

(1) [was] from a country that maintains a Category 1 rating under the FAA's IASA program; or (2) [was] from a country that either holds an IASA Category 2 or 3 rating or has not been assessed by the FAA, and the foreign air carrier [was] using aircraft wet leased and operated by a duly authorized and properly supervised U.S. carrier or foreign carrier from a Category 1 country.⁴⁷

When a country slipped from a Category 1 rating to a Category 2 or 3 rating, the code-share arrangement was considered on a case-by-case basis. 48 If an existing foreign code-share partner fails to meet ICAO standards the FAA formally freezes that foreign code-share partner's operations into the United States and the FAA may heighten surveillance inspections on these carriers while they are in the United States. 49 If deficiencies were uncorrectable within a reasonable time, the FAA would notify the DOT and recommend they revoke or suspend the foreign airlines operating authority. 50 Today, the FAA still uses the IASA program retaining authority to reassess a CAA at anytime if it believes the minimum

^{43.} See generally ICAO Preamble, supra note 36.

^{44.} Id.

^{45.} See generally ICAO Preamble, supra note 36; see also European Community Contribution, supra note 30, at annex 2, at 14.

^{46.} Office of the Secretary & Federal Aviation Administration, Department of Transportation, Code-Share Safety Program Guidelines, at 1 (Feb. 29, 2000) [hereinafter Guideline Details].

^{47.} Id.

^{48.} Id.

^{49.} FEDERAL AVIATION ADMINISTRATION, OVERVIEW OF THE FEDERAL AVIATION ADMINISTRATION FLIGHT STANDARDS SERVICE: INTERNATIONAL AVIATION SAFETY ASSESSMENT (IASA) PROGRAM, at http://www.faa.gov/avr/iasa/iasabr15.htm (last visited Mar. 22, 2005).

^{50.} Id.

2004] Sabaca FAA Approves IATA's Operational Safety Audit (IOSA) Program: A Hi 7

ICAO international standards are not being met.⁵¹ Yet, in May 2000, the FAA eliminated Category 3 deciding only to use Category 1 and Category 2 rankings.⁵²

B. THE FIRST DEMAND FOR SAFETY REGULATIONS OF INDIVIDUAL CARRIERS IN THE UNITED STATES

In 1999, there were 196 foreign code-share agreements in existence. In a 1999 report, results from the IASA program indicated seventy out of ninety-four foreign carriers received a Category 1 rating.⁵³ As of 2001, results from the IASA program indicated 40% of countries evaluated by the FAA lacked sufficient oversight to ensure the ICAO minimum international standards were met.⁵⁴ Accordingly, although foreign CAA's were directly responsible for overseeing the safety of foreign air transportation by their foreign airlines,⁵⁵ assessments by the ICAO have revealed that many States are facing serious difficulties in fulfilling their safety obligations.⁵⁶

In 1998, the ICAO attempted to reconcile these deficiencies by launching its own audit program called the Universal Safety Oversight Assessment Programme ("USOAP").⁵⁷ The USOAP was designed to audit the level of compliance of States with ICAO SARPs and to ensure compliance with the ICAO's minimum international safety standards.⁵⁸ Although the USOAP provided a baseline level of compliance, the U.S. as well as some other countries, established higher standards.⁵⁹

In September 1999, the DOT was alerted to the need for safety regulations of individual airlines amongst foreign code-share partners by the devastating crash of SwissAir Flight 111.60 At the time of this tragedy, Switzerland had a Category 1 ranking by the IASA.61 Furthermore, SwissAir was considered one of the world's safest airlines.62 Flying on this fatal SwissAir flight, through a code-share agreement with Delta Airlines, were fifty-three U.S. passengers who had purchased tickets from Delta

^{51.} European Community Contribution, supra note 30, annex 2, at 14.

^{52.} Id.

^{53.} FEDERAL AVIATION ADMINISTRATION, FAA FLIGHT STANDARDS SERVICE: INTERNATIONAL AVIATION SAFETY ASSESSMENT (IASA) PROGRAM, Oct. 12, 1999 [hereinafter FAA FLIGHT STANDARDS SERVICE], at http://www.faa.gov/avr/iasa/iasaxls.htm.

^{54.} European Community Contribution, supra note 30, annex 2, at 14.

^{55.} Guideline Details, *supra* note 46, at 1 n.1. *See also* European Community Contribution, *supra* note 30, para. 2.2.4.

^{56.} European Community Contribution, supra note 30, para. 2.2.6, at 4.

^{57.} Id. annex 4, at 16.

^{58.} Id.

^{59.} Id.

^{60.} Phillips, supra note 1, at A01; see also Executive Summary, supra note 1, at 1.

^{61.} FAA FLIGHT STANDARDS SERVICE, supra note 53.

^{62.} Phillips, supra note 1; see also Executive Summary, supra note 1, at iv-v.

Airlines.⁶³ This tragedy signified that "the odds of dying on some foreign airlines are many times higher than on U.S. carriers, in part because crew training and government oversight can vary widely from country to country."⁶⁴ Recognizing the American traveler's right to expect the highest standards of safety whether flying on a U.S. airline or its foreign codeshare partner, the United States government accepted that "there appears to be little correlation between FAA's assessment of the foreign regulatory system and the actual safety performance of a carrier."⁶⁵ Accordingly, the U.S Transportation Secretary, Rodney E. Slater, directed the DOT to develop a code-share safety plan to ensure foreign codeshare partners meet international safety standards.⁶⁶

C. FAA CODE-SHARE SAFETY AUDIT MANDATE AND GUIDELINES

In 2000, aviation safety became top priority in the United States. In addition the FAA's assessment and approval of CAAs through the IASA program, the DOT recognized the need to develop a method for U.S. airlines to assess *individual*⁶⁷ foreign code-share partner's levels of safety to ensure Americans knew such foreign airlines were complying with ICAO safety standards.⁶⁸ On February 29, 2000, the U.S. government mandated that all U.S. airlines must audit current and prospective foreign code-share partners to determine if the code-share service is in the public interest.⁶⁹

This mandate only applied to "authorized U.S. air carriers certifi-

^{63. 145} Cong. Rec. E1138 (daily ed. June 7, 1999) (statement of Rep. Oberstar).

^{64.} Phillips, supra note 1, at A01; see also EXECUTIVE SUMMARY, supra note 1, at ii, iv-v.

^{65.} Press Release, House of Representatives Transportation & Infrastructure Committee, Oberstar Introduces Code-Sharing Bill (May 27, 1999), at http://www.house.gov/transportation_dem-ocrats/press/990527_CodeShare.html.

^{66.} Press Release, Department of Transportation, Secretary Slater Outlines Steps to Assure Safety of Code-Share Flights (Dec. 6, 1999) (on file with author) [hereinafter Slater Press Release]; see also 145 Cong. Rec. E1138 (daily ed. June 7, 1999) (statement of Rep. Oberstar); see also Air Passenger Rights, supra note 20 (recognizing code-share alliances necessitate common standards to ensure safety for all Americans).

^{67.} The DOT recognized the need to develop a method for U.S. airlines to assess individual airlines because foreign CAA's had the burden of regulating aviation safety of which many had serious difficulty fulfilling these regulations. Although the FAA regulated code-share partnerships in the United States through the IASA program and approved only those airlines with a Category 1 rating, the FAA had no personal knowledge as to whether the foreign airlines were in fact complying with ICAO safety standards. Accordingly, the only way to ensure foreign code-share partners were complying with ICAO minimum safety standards was to conduct safety audits individually. See Guidelines Press Release, supra note 22; see also Slater Press Release, supra note 66 (outlining guidelines to ensure safety of code-share flights).

^{68.} Guidelines Press Release, supra note 22.

^{69.} Tom Ballantyne, Safety Audits: Numbers Becoming 'Unmanageable', ORIENT AVIATION, May 2001, at 3, at http://www.orientaviation.com/pages/back_issues/01_05/OA_V8N7_safety_audits.html.

2004 patra: A Approver ATA's Opretional Safety in Wash (Nosan: A Hi 9

cated under 14 CFR Part 121."70 This regulation specifies operating requirements for certain passenger airlines, which includes most major airlines. 71 and establishes the operating requirements of U.S. airlines in compliance with ICAO's SARP requirements.⁷² As a result of this mandate, all U.S. airlines certified under 14 CFR Part 121 seeking or utilizing a foreign code-share partner were required to develop an approved codeshare safety audit program providing for periodic on-site safety audits of foreign code-share carriers and in compliance with applicable ICAO safety standards.⁷³ Not only were U.S. airlines required to audit foreign code-share partners themselves, but also each U.S. airline's code-share safety audit program required the FAA's and OST's authorization.⁷⁴ The FAA and the OST were required to review each audit program to ensure U.S. airlines were conducting these audits correctly.⁷⁵ Accordingly, if an airline refused to conduct an audit, the FAA would deny such airline's code-share application until such airline complied.⁷⁶ This mandate only required U.S. airlines audit foreign code-share partners, not domestic code-share partners.⁷⁷

Once an airline developed a code-share safety audit program, the FAA and OST reviewed each airline's audit program to ensure the program provided an acceptable means of determining the levels of safety maintained by the foreign carrier.⁷⁸ In February 2000, the DOT issued "Code-share Safety Audit Program Guidelines" ("Guidelines"), devel-

^{70.} GUIDELINE DETAILS, supra note 46, at 2.

^{71.} FEDERAL AVIATION ADMINISTRATION, INFORMATION FOR AIR CARRIERS USING PART 139 AIRPORTS, at http://www.faa.gov/arp/certification/partpart139/carriers.cfm (last visited March 20, 2005).

^{72.} Title 14 CFR Part 121 established regulations for domestic and international commercial air transport. Specifically, the aircraft certification is available to all airlines; however, such airline in order to conduct operations in the U.S. must be authorized by the Administrator and issued an Air Carrier Certificate. Furthermore, part 121.1 prescribes rules governing airlines holding an Air Carrier Certificate or Operating Certificate under Part 119. Accordingly, part 119 provides the certifications, authorizations, and prohibitions applicable to airlines. Part 119.33 establishes general requirements providing that "[a] person may not operate as a direct air carrier unless that person—(1) Is a citizen of the United States; (2) Obtains an Air Carrier Certificate; and (3) Obtains operations specifications that prescribe the authorizations, limitations, and procedures under which each kind of operation must be conducted." See Operating Requirements: Domestic, Flag & Supplemental Operations, 14 C.F.R. § 121 (2005); Certification: Air Carriers and Commercial Operators, 14 C.F.R. § 119 (2005).

^{73.} See Guideline Details, supra note 46, at 2; Guidelines Press Release, supra note 22 (stating only airlines from countries with Category I ratings from the FAA satisfy ICAO standards for safety oversight). See generally ICAO Preamble, supra note 36 (discussing ICAO standards).

^{74.} GUIDELINE DETAILS, supra note 46, at 2.

^{75.} Id

^{76.} Guidelines Press Release, supra note 22.

^{77.} Id.

^{78.} See id.

oped by the FAA and OST, to provide a method for U.S. airlines to assess the safety of their foreign code-share partners.⁷⁹

The Guidelines established the minimum necessary elements for U.S. airlines to incorporate in their code-share safety audit programs as well as the content of the Audit Report and the content of the Compliance Statement.⁸⁰ The Guidelines provided that, at a minimum, a U.S. airline's code-share safety audit program should address:

[1] Methodology and approach; [2] Specific operational areas to audit; [3] Criteria for defining satisfactory audit results; [4] System for reporting and correcting findings; [5] Monitoring system; [6] Auditor qualification and authorization; [7] Audit frequency (including the process for auditing codeshares in existence when the guidelines are put in place).⁸¹

The Guidelines provided a detailed description of the applicable review standards for each element.⁸²

If the FAA and OST approved a U.S. airline's code-share safety audit program, the DOT issued a letter of acceptance to the U.S. airline.83 Upon receipt of the letter of acceptance, the Principal Operations Inspector ("POI") of each U.S. airline was required to incorporate the accepted safety audit program into its operating manual⁸⁴ and record such date of incorporation in the Program Tracking and Reporting Subsystem ("PTRS") as provided by 14 CFR part 121, section 121.133.85 The POI was required to review the currency of the accepted U.S. airline's codeshare safety audit program at least once a year and record this date in the PTRS.86 If the POI deemed the program not current during this review, then the POI was required to "provide the necessary follow-up actions to ensure currency and enter the date of the revision in the manual required by section 121.133 making it current."87 However, if the FAA and OST deemed a safety audit program unacceptable, then the FAA and OST would return the program to the U.S. airline with specific reasons for their findings in writing and the U.S. airline had to take corrective

^{79.} See Guideline Details, supra note 46, at 2-4; see also Guidelines Press Release, supra note 22.

^{80.} See GUIDELINE DETAILS, supra note 46, at 2.

^{81.} See id. at 3 (detailing the standards for U.S. carrier review of its U.S. code-share service on the foreign code-share carrier).

^{82.} Id. at 3-8.

^{83.} GUIDELINE DETAILS, *supra* note 46, at 3; *see also* HANDBOOK BULLETIN FOR AIR TRANSPORTATION CODE-SHARE AUDIT PROGRAMS, Doc. No. HBAT 00-12, para. 2.B, at 1, July 7, 2000, *at* http://www.faa.gov/avr.afs.hbat/hbatl.htm.

^{84.} Id.

^{85.} Id. para. 3.A, at 2 (providing detailed instructions to the POI as to which activity codes to use in the PTRS input).

^{86.} Id. para. 3.B, at 2.

^{87.} Id.

2004] Sabec: FAA Approves IATA's Operational Safety Audit (IOSA) Program: A Hill Safety Audit (IOSA)

action.88

Once a U.S. airline established an approved code-share safety audit program, the U.S. airline was thereafter required by the DOT to conduct initial and periodic audits of both current and prospective foreign code-share partners.⁸⁹ U.S. airlines were only permitted to conduct audits and submit code-share applications for foreign airlines from countries with a Category 1 rating from the FAA.⁹⁰

The content of the U.S. airline's safety audit report was confidential and required to adhere to the requirements established in the "Codeshare Safety Program Guidelines." 95

As before, to obtain authority for a U.S. code-share service, the DOT had to make a public interest determination about the safety of the foreign code-share partner. Accordingly, as part of their application, each airline was required to submit a signed and dated Compliance Statement with their Audit Report to the FAA and OST, demonstrating an onsite safety audit was conducted on the foreign code-share carrier and the foreign code-share carrier complied with the applicable ICAO interna-

- 88. GUIDELINE DETAILS, supra note 46, at 3.
- 89. Id. at 2.
- 90. Guidelines Press Release, supra note 22.
- 91. GUIDELINE DETAILS, supra note 46, at 9; see also Guidelines Press Release, supra note 22.
- 92. Title 14 CFR part 129 provides in pertinent part that "no foreign air carrier may operate any aircraft within the United State unless that aircraft carries current registration and airworthiness certificates issued or validated by the country of registry and displays the nationality and registration markings of that country." 14 C.F.R. § 129.13(a) (2005).
- 93. GUIDELINE DETAILS, supra note 46, at 7; see also Guidelines Press Release, supra note 22.
 - 94. Guideline Details, supra note 46, at 8.
 - 95. Id.
- 96. *Id.* at 1-2 (considering reciprocal agreements, impact on competition, the financial strength of the foreign carrier, and finally safety to determine if a code-share partnership is in the public interest).

tional safety standards within forty-five days of completion of the audit.⁹⁷ The content of the Compliance Statement was required to adhere to the minimum standards provided in the Guidelines.⁹⁸ Prior to approval of the application, "[t]he FAA will review whether the U.S. airline applicant is carrying out audits in accordance with the U.S. carrier's [audit] program, will review the audit report and will consult other relevant safety-related information"⁹⁹ and report its position to OST.¹⁰⁰ The OST will consider approving an application based on economic and policy grounds but only after approval by the FAA.¹⁰¹ Assuming no issues remain, OST will then issue a decision to the U.S. air carrier on the proposed code-share application.¹⁰²

D. THE SECOND DEMAND FOR SAFETY REGULATIONS OF INDIVIDUAL CARRIERS IN THE UNITED STATES

In 2001, only a year after the DOT's mandate, the airline industry began calling for global standards, complaining the volume of safety audits conducted by individual operators was unmanageable. ¹⁰³ Unfortunately, the demand for airline safety around the world resulted in a mushrooming of audits, costing the airline industry millions. ¹⁰⁴ The Flight Safety Foundation ("FSF") ¹⁰⁵ estimated more than 10,000 airline audits were conducted each year. ¹⁰⁶ Other estimates suggest the number of annual airline audits was far greater. ¹⁰⁷ In 2001, the IATA estimated the number of annual airline audits was as high as 70,000 a year and still growing. ¹⁰⁸ Moreover, the IATA estimated safety audits cost about \$3.6 billion a year. ¹⁰⁹

In addition to an airline's own safety audits and thorough checks by their own government's civil aviation regulator, several other groups con-

^{97.} GUIDELINE DETAILS, supra note 46, at 2, 9; see also Guidelines Press Release, supra note 22.

^{98.} GUIDELINE DETAILS, supra note 46, at 9.

^{99.} Guidelines Press Release, supra note 22.

^{100.} Guideline Details, supra note 46, at 10.

^{101.} Id.

^{102.} Id. at 11.

^{103.} Ballantyne, supra note 69, at 2-3.

^{104.} International Air Transport Association, IATA Plans Ambitious Timetable for Global Audit System, World Airline News, June 8, 2001 [hereinafter IATA Ambitious Timetable], at http://www.findarticles.com/p/articles/mi_m0ZCK/is_23_11/ai_75434282.

^{105.} FSF is an independent, non-profit international organization providing a neutral forum for the aviation industry to meet and discuss safety concerns. See FLIGHT SAFETY FOUNDATION, Welcome, at http://www.flightsafety.org/home.html.

^{106.} Ballantyne, supra note 69, at 2.

^{107.} IATA Ambitious Timetable, supra note 104.

^{108.} Id.

^{109.} Id.

Sabec: FAA Approves IATA's Operational Safety Audit (IOSA) Program: A Hi 13 (IOSA) 13

ducted reviews. 110 For example, the ICAO conducted safety audits at a state level, the IATA conducted safety audits for prospective new members, and eventually all its members, global airline alliance members conducted their own audits, and prospective code-share partners conducted safety audits on each other. 111 Moreover, as Leroy Keith, Association of Asian Pacific Airlines' ("AAPA") technical director, said, "[e]very audit by these people basically has the same parameters and the same outcome in mind. Our [member] airlines have expressed concern about the number of audits required. ... "112 As such, it was not long before many in the airline industry were concerned about the proliferation of airline safety audits. 113 Although "[t]he credibility of [the] industry and its continued high degree of acceptability" necessitates safety audits, airlines began complaining that the volume of audits were growing too large, thus, diverting attention from critical daily tasks and resulting in significant cost expenditures, the airline industry simply could not afford. 114 "After three years of crisis, the need for fundamental change [became] critical."115

Although prior attempts by individual governments (i.e., DOT's guidelines and mandatory audits) and the ICAO, through the USOAP, to implement safety standards created new concerns, the airline industry still dreamed of developing worldwide standards for airline safety audits. As the chairman and president of the FSF, Stuart Mathews, stated "[w]e would like to see carriers evaluated, once a year or every two years, by a competent and qualified auditing team working to a standard everyone could accept." Discussions amongst several prominent airlines and airline associations, including United as well as other U.S. airlines and European Airlines Association members, suggested the best path to achieving global standards for safety audits would have to be through IATA and ICAO because these organizations "have the clout to bring together airlines and states to design an internationally acceptable model." Little did the airline industry know that a worldwide standard for airline safety audits was in the midst of development by IATA.

^{110.} Ballantyne, supra note 69, at 1.

^{111.} Id.

^{112.} Ballantyne, supra note 69, at 1-2.

^{113.} IATA Ambitious Timetable, supra note 104; see also Ballantyne, supra note 69, at 1.

^{114.} Ballantyne, supra note 69, at 1-2.

^{115.} Giovanni Bisignani, IATA Director General & CEO, Address at the McGill Worldwide Conference on Current Challenges in International Aviation (Sept. 25, 2004), available at http://www.iata.org/pre-ssroom/speeches/2004-09-25-01.htm.

^{116.} See generally Ballantyne, supra note 69.

^{117.} Id. at 2.

^{118.} Id.

^{119.} Id.

III. BIRTH OF A NEW SAFETY AUDIT PROGRAM

As airlines were calling for internationally recognized standards for airline safety audits, IATA was already collaborating with the FSF as well as other key players positioned to shape new policy in an attempt to develop worldwide standards for airline safety audits. ¹²⁰ Even prior to the DOT's launch of the Guidelines, IATA and its member airlines were diligently working to improve safety in the airline industry. ¹²¹

A. IATA: Who Are They and What Do They Do

For years, IATA has influenced the airline industry worldwide "to meet airline requirements for safety, efficiency, and functionality." ¹²² Unlike the ICAO and other prominent aviation agencies that are government-owned, the IATA is an independent international body. ¹²³ Founded in 1945, the IATA currently consists of more than 270 member airlines from approximately 140 nations, ¹²⁴ charged with the goal and ambition to improve the level of safety worldwide. ¹²⁵ IATA receives most of its funding by marketing its products and services to its member airlines. ¹²⁶ Since 1945, IATA's reputation in the airline industry has grown as IATA pioneered the global aviation industry by cooperating with the ICAO, providing the ICAO with airline input as it drafted its SARPs, and serving the stated policies of most of the world's governments. ¹²⁷ IATA, through its global influence, credibility, and access to worldwide technical resources, is well positioned to implement global audit standards and reduce costs industry-wide. ¹²⁸

Although industry shocks, such as the terrorist attacks, awakened uncertainty in the airline industry and left the airline industry drowning in one of the most difficult business environments of recent times, IATA has undertaken many initiatives to promote regulatory change within the air-

^{120.} Ballantyne, supra note 69, at 2; see also International Air Transportation Association, 2004 Annual Report 8-11 (2004) (discussing IATA's collaboration in order to modernize the industry's safety and regulatory framework).

^{121.} See generally AIR PASSENGER RIGHTS, supra note 20.

^{122.} IATA ANNUAL REPORT, supra note 120, at 26.

^{123.} See generally IATA Ambitious Timetable, supra note 104.

^{124.} International Air Transportation Association, IATA History: Introduction [hereinafter IATA History], at http://www.iata.org/about/history.htm (last visited Nov. 12, 2004).

^{125.} Trigger Points: Interview with Guenther Matschnigg, Senior Vice President, IATA Safety, Operations & Infrastructure, Air Safety Week (Aug. 23, 2004), available at http://www.find-articles.com/p/articles/mi_m0UBT/is_33_18/ai_n6270156/print (last visited Nov. 12, 2004).

^{126.} IATA HISTORY, supra note 124.

^{127.} Id.

^{128.} IATA Ambitious Timetable, supra note 104.

2004pab fra FA AApparoves hatta gropetianed hafe ty affectit AQSAI PROSEAN; A Hi 15

line industry.¹²⁹ For example, the sense of urgency for new security measures following September 11, 2001 precluded the development of "international harmonisation."¹³⁰ As such, IATA, recognizing safety is essential to the vitality of the airline industry and believing fundamental reform must continue, has committed to improving global aviation safety through efficiency, reducing costs, focusing on best practices, and promoting the exchange of information.¹³¹

In 2003, IATA launched a six-point integrated global safety program, which included the IOSA program.¹³² The IOSA program allows IATA to be involved directly in establishing and managing improvements in safety and efficiency within the aviation industry while also reducing industry costs.¹³³ In 2001, IATA began developing the IOSA program in order to meet two aviation industry needs: cost-effectiveness ¹ and safety.¹³⁴

Following two years of intense development and collaborating with key policy makers, airlines, and international aviation experts. 135 IOSA introduced to the airline industry a single, common airline audit standard. 136 After collaboration with organizations such as the ICAO, the FAA, the FSF, and Europe's Joint Aviation Authority ("JAA"), the IATA was finally able to launch the IOSA program to provide a standardized audit program with internationally recognized standards for the purpose of improving worldwide operations while streamlining operational audits.¹³⁷ Although the FAA and the ICAO have been involved in the development of the IOSA program from the beginning, only after extensive investigation did the FAA fully accept the IOSA program. 138 Accordingly, as Giovanni Bisignani, IATA Director General and CEO, stated, "IOSA is the world's only airline safety audit program incorporating globally recognised standards and best practices."139 Furthermore. IOSA provides several benefits for the airline industry. Not only does IOSA provide internationally recognized operational audit standards, but it also provides a quality audit program, accredited training organizations,

^{129.} IATA ANNUAL REPORT, supra note 120, at 1-5, 18http:///.

^{130.} Id. at 13.

^{131.} Id. at 11, 13.

^{132.} Id. at 10http:///.

^{133.} Idhttp:///.

^{134.} INTERNATIONAL AVIATION TRANSPORTATION ASSOCIATION, IATA OPERATIONAL SAFETY AUDIT: COMMONLY ASKED QUESTIONS 1-2 (2004) [hereinafter IOSA COMMONLY ASKED QUESTIONS], at http://www.iata.org/NR/ContentConnector/CS2000/SiteInterface/sites/ps/iosa/file/iosa_caq_may06.pdf (last visited Apr. 8, 2005).

^{135.} FAA Approves of IATA Safety Audit Process, WEEKLY NEWS DIGEST, July 2, 2004.

^{136.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 1.

^{137.} IATA Press Release, supra note 17.

^{138.} Id.

^{139.} Id.; see also IATA ANNUAL REPORT, supra note 120, at 10.

structured audit methodology, and elimination of audit redundancy resulting in cost reduction.¹⁴⁰ Accordingly, IATA claims, "[a]n airline that has been audited to full conformity with IOSA standards makes a clear positive statement about the integrity of its operations and its ability to manage associated risks."¹⁴¹ To get the IOSA program off to a positive start, IATA will also absorb all 2004 program costs.¹⁴²

B. IOSA PROGRAM: INTERNAL STRUCTURE

The IOSA program is designed to assess the operational, management, and control systems of an airline by auditing the following operational areas: (1) Corporate Organisation & Management; (2) Flight Operations; (3) Operational Control/Flight Dispatch; (4) Aircraft Engineering & Maintenance; (5) Cabin Operations; (6) Aircraft Ground Handling; (7) Cargo Operations; and (8) Operational Security. IATA structured the IOSA program "[t]o ensure integrity, quality, and oversight" of the IOSA program. Accordingly, IOSA's internal structure consists of multiple entities, including IATA, Audit Organizations, Endorsed Training Organizations, and the IOSA Oversight Committee.

IATA's main role is to provide ongoing quality oversight of the IOSA program. Specifically, "IATA oversees the accreditation of Audit Organizations and Endorsed Training Organizations, ensures continuous development of the IOSA Standards and Recommended Practices and manages the central database of IOSA Audit Reports." Additionally, IATA maintains the IOSA Registry, which is a list of current airlines that have been successfully audited under IOSA. Any airline can access the IOSA Registry. 149

Under the IOSA program, accredited Audit Organizations¹⁵⁰

^{140.} IATA Press Release, supra note 17.

^{141.} Id. It is still unclear who will pay after 2004.

^{142.} IATA ANNUAL REPORT, supra note 120, at 11http:///.

^{143.} IATA Press Release, supra note 17; see also IOSA CommonLy Asked Questions, supra note 134, at 3.

^{144.} IATA Press Release, supra note 17.

^{145.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 4.

^{146.} INTERNATIONAL AIR TRANSPORTATION ASSOCIATION, WHAT WE DO: IOSA ROLE, at http://www.iata.org/whatwedo/auditing; see also IATA Press Release, supra note 17 (stating IATA is the "[d]eveloper of the Standards, keeper of the IOSA Registry, Accreditation of Audit Organisations and Endorsed Training Organisations, and ongoing Quality oversight of the IOSA Programme").

^{147.} IATA Press Release, supra note 17.

^{148.} IOSA - The IATA Operational Safety Audit Programme, para. 3.1, at 2, ICAO Executive Committee Working Paper, A35-WP/73 (July 7, 2004) [hereinafter IATA Safety Audit].

^{149.} *Id*

^{150.} A list of Audit Organizations approved by IATA is available on IATA's website. See http://www.iata.org.

2004 pb 9FAFA AApproves IATA Sporational Safety (AGAIL P(POSA) A Hi 17

throughout the world conduct operational safety audits of U.S. and non-U.S. carriers, as well as U.S. carrier's foreign code-share partners. 151 IOSA is designed to conduct audits in a standardized and consistent manner. 152 Therefore, when an Audit Organization seeks IOSA accreditation. IATA uses standards published in the IOSA Program Manual to accredit Audit Organizations. 153 Currently, the IOSA program consists of six accredited Audit Organizations, housing more than 120 experienced aviation auditors who conduct the reviews.¹⁵⁴ IOSA auditors only receive approval if they successfully complete an intense training and qualification process by Endorsed Training Organizations. 155 Individual airlines are encouraged to select an Audit Organization they feel most comfortable using. 156 IATA provides no pricing guideline to its Audit Organizations but, rather, allows them to set their own pricing based on, inter alia, geographical location, airline size, and facilities.¹⁵⁷ To ensure auditors adhere to IOSA standards when conducting audits, the IOSA auditors are required to follow detailed guidance provided in an operations manual called the IOSA Auditor Handbook. 158

Finally, the IOSA Oversight Committee ("IOC") functions to ensure the IOSA program maintains a "high level of quality and standardization." Reporting indirectly to the IATA Board of Governors, the IOC is comprised of representatives from twenty-five member airlines as well as ten regulatory authorities. IOC current members include "representatives for the regulatory authorities of Australia (CASA), Canada (Transport Canada), China, European Union, France (DGAC), Scandinavia, and the United States (FAA)." 161

C. IOSA Program: Procedure Structure

An airline does not have to be an IATA member in order to seek an IOSA audit¹⁶² and there is no indication this will change in the future.

^{151.} FAA Recognizes International Safety Audit Program, FAA INTERCOM, Aug. 2004, at 3; see also IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 7.

^{152.} Business Solutions: IOSA, supra note 15.

^{153.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 5.

^{154.} IATA ANNUAL REPORT, supra note 120, at 10.

^{155.} IATA Press Release, supra note 17; see also IOSA CommonLy Asked Questions, supra note 134, at 5.

^{156.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 6.

^{157.} Id. at 8.

^{158.} Id. at 3.

^{159.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 5.

^{160.} Id.

^{161.} ETF, supra note 16.

^{162.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 2.

The IOSA program is available to all airlines, ¹⁶³ thus preventing the inefficient need for multiple airline audits. However, beginning in 2005, for those new airlines interested in joining IATA, submission to an audit by the IOSA program will be required. ¹⁶⁴ At that time, new airlines will be required to submit to an IOSA standardized "New Member Entry Audit," which is not a full-audit as described above. ¹⁶⁵ Once a new airline successfully completes this, it may become an IATA member. ¹⁶⁶ Because the "New Member Entry Audit" is not a full IOSA audit, the airline is thereafter required to seek a full IOSA audit within a two-year period. ¹⁶⁷ An airline applicant may initially submit to a full IOSA audit to satisfy IATA new Member Entry requirements. ¹⁶⁸ Furthermore, the IOSA program requires the airline's subsidiaries holding an air operator certificate must also submit to an IOSA audit. ¹⁶⁹

Before submitting to an audit, the airline and the Audit Organization enter into an Audit Agreement.¹⁷⁰ Upon completion of an IOSA audit, a closing meeting is held on site at the audited airline's premises at which time the audited airline is given an interim audit report by the Audit Organization.¹⁷¹ Thereafter, the Audit Organization is required to submit an IOSA Audit Report to the audited airline within fifteen business days from the completion of the audit.¹⁷² If an airline does not satisfy all the IOSA standards, the airline must develop a corrective action plan and has twelve months to clear all the audit findings.¹⁷³ Only after an audited airline fully clears all the findings and conforms to the IOSA standards is the airline registered as an IOSA Operator and entered into the IATA Registry.¹⁷⁴ At this point, IATA issues a formal dated certificate of registration to the airline.¹⁷⁵ An airline's registration is only valid for twenty-four months from the date of the completion of the audit at which time IATA provides renewal notification to the airline operator.¹⁷⁶

^{163.} IATA Press Release, supra note 17; see also IOSA CommonLy Asked Questions, supra note 134, at 2.

^{164.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 2-3.

^{165.} Id. at 3.

^{166.} Id.

^{167.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 3.

^{168.} Id.

^{169.} Id. at 6.

^{170.} Id.

^{171.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 6.

^{172.} Id. at 8.

^{173.} Id. at 6.

^{174.} Id. at 3; see also IATA Press Release, supra note 17.

^{175.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 8.

^{176.} IATA Press Release, supra note 17.

2004 Pabra: AAA Approves lata's Depatiand Rafe suffery taluan Prosan: A Hi19

D. FUTURE IMPLICATIONS

As of September 2003, twenty IOSA airline audits had been conducted.¹⁷⁷ By January 1, 2006, all IATA Member Airlines will be audited to IOSA standards.¹⁷⁸ IOSA will replace most code-share audits today by providing a system of audit sharing.¹⁷⁹ Prior to the IOSA program, when a code-share agreement was contemplated an operational audit had to be conducted by one or both carriers to ensure operational integrity.¹⁸⁰ Now, when a code-share agreement is contemplated with an existing IOSA Operator, no additional audit is necessary of prospective code-share partners if that carrier has already been audited and demonstrated they are in compliance with IOSA standards.¹⁸¹ Accordingly, a registered IOSA airline has the opportunity for a range of shared commercial opportunities.¹⁸² Moreover, through the IOSA program, "the industry will be in a position to achieve the benefits of cost-efficiency through a significant reduction in audit redundancy."¹⁸³

Given the IOSA program has proven to compliment the ICAO USOAP's effort to optimize aviation safety, ¹⁸⁴ IOSA is gaining vital industry support as an acceptable evaluation system for conducting audits by applying worldwide standards. ¹⁸⁵ For IOSA, the benefits are clear and the future is very promising. ¹⁸⁶ However, while the FAA is trying to ensure the safety and security of American passengers, the question of liability and monetary ramifications remain unanswered with American travelers and in the law community.

IV. CONCLUSION

Today, roughly fifty million international passengers a year are paying for their ticket through a particular airline, but are using at least two, sometimes five or more, airlines to complete some, or all, of their journey. Moreover, nearly 300 airlines have formed code-share alliances accepting each other's tickets on a reciprocal basis. Furthermore, more than 70,000 audits are conducted yearly to ensure global aviation safety. Even with the staggering number of audits, the IOSA program is esti-

^{177.} IATA Safety Audit, supra note 148, para. 1.2, at 2.

^{178.} IOSA COMMONLY ASKED QUESTIONS, supra note 134, at 2.

^{179.} Id. at 3.

^{180.} Id. at 4.

^{181.} Id.

^{182.} IATA Press Release, supra note 17.

^{183.} Business Solutions: IOSA, supra note 15.

^{184.} IATA Annual Report, supra note 120, at 11.

^{185.} ETF, supra note 16.

^{186.} IATA Safety Audit, supra note 148, para. 5.3, at 3.

^{187.} IATA HISTORY, supra note 124.

^{188.} Id.

mated to save billions of dollars by reducing the number of audits conducted by airlines each year as well as save lives by providing globally recognized safety standards.¹⁸⁹

In these difficult times, it cannot be overlooked that the fear of traveling still exists. Yet, the FAA's recent acceptance of the IOSA program attempts to offer assurance to American passengers of the organization's commitment to improving global international safety. ¹⁹⁰ Although liability and monetary concerns remain amongst American travelers and in the minds of lawyers, the FAA through the IOSA program has provided yet another method for ensuring an even safer, more secure, and more efficient global aerospace system that contributes to national security and the promotion of the U.S. aerospace safety. ¹⁹¹

^{189.} IATA Ambitious Timetable, supra note 104.

^{190.} IATA Annual Report, supra note 120, at 11http:///.

^{191.} ETF, supra note 16.